MSFT-1740 (301921.01)

PATENT

What is Claimed:

- A method for debugging an object model comprising:
 exposing a set of breakpoints through a debugging interface of an execution environment;
 checking the status of the breakpoints at predetermined intervals; and
 responding to a request for suspend and resume.
- 2. The method as recited in claim 1, further comprising communicating between a package deployment component and a pluggable component.
- 3. The method as recited in claim 1, further comprising receiving input for processing by the debugging interface, the input indicative of instructions to execute or deploy a package.
- 4. The method as recited in claim 1, further comprising setting the breakpoint in at least one task.
- 5. The method as recited in claim 4, further comprising encountering the set breakpoint by the task during task execution.
- 6. The method as recited in claim 5, further comprising communicating the breakpoint to the debugging interface.
- 7. The method as recited in claim 6, further comprising analyzing by the debugging interface the states of the task prior to encountering the set breakpoint.
- 8. The method as recited in claim 7, further comprising resuming the task by the debugging interface.
- 9. A computer readable medium having instructions to instruct a computer to perform the method as recited in claim 1.

MSFT-1740 (301921.01)

PATENT

10. A method for debugging an object model, comprising: providing an interface manager that communicates with one or more of the components of the object model;

determining the location of breakpoints; executing the runtime to encounter the breakpoints.

- 11. The method as recited in claim 10, further comprising executing a package.
- 12. The method as recited inc claim 11, further comprising executing at least one task resulting from the package execution.
- 13. The method as recited in claim 10, wherein the determining step comprises setting the breakpoint by the interface manager.
- 14. The method as recited in claim 10, further comprising suspending an object model component containing a breakpoint upon encountering the breakpoint.
- 15. The method as recited in claim 14, further comprising analyzing the object model components while suspended to determine if a runtime problem exists.
- 16. The method as recited in claim 14, further comprising resuming a suspended object model component.
- 17. A computer readable medium having computer readable instructions to instruct a computer to perform the method as recited in claim 10.
- 18. A system to debug breakpoints in pluggable components comprising:
 a debugging interface, the debugging interface capable of communicating with the
 pluggable components during run time to observe component behavior and to control
 components; and

MSFT-1740 (301921.01)

PATENT

breakpoints, the breakpoints being set in the pluggable components such that during runtime when a break point is encountered, the debugging interface is capable of suspending and/or resuming the operations of the pluggable components to observe pluggable component operations.

- 19. The system as recited in claim 18, wherein the debugging interface sets the breakpoints in the pluggable components.
- 20. The system as recited in claim 19, wherein the debugging interface displays the states of the pluggable components during run-time and during suspension.